

CLAIMS

What is claimed is:

1. A surgical instrument for the dissection of bone or other tissue having a motor with a power output, the surgical instrument comprising:
  - a tool having a shaft with a dissection area disposed adjacent a distal end and a coupling area disposed adjacent a proximal end;
  - a coupling assembly configured for coupling the power output to said coupling area of said tool; and
  - an angled attachment tube positioned along at least a portion of said shaft and substantially supporting a portion of said shaft disposed adjacent said dissection area, wherein said attachment tube is movably coupled to said coupling assembly.
2. The surgical instrument of claim 1, wherein said coupling assembly has a longitudinal axis and said angled attachment tube is configured for coupling with the coupling assembly at a plurality of locations.
3. The surgical instrument of claim 2, wherein said attachment tube is configured such that movement along said longitudinal axis is accomplished without substantial rotary motion.
4. The surgical instrument of claim 1, wherein said attachment tube is axially movably coupled to said coupling assembly.
5. The surgical instrument of claim 1, further including a second coupling assembly linked to said coupling assembly, said second coupling assembly adapted to selectively lock said attachment tube to said coupling assembly.
6. The surgical instrument of claim 5, wherein said second coupling assembly includes a locked position wherein said attachment tube is locked to said coupling assembly, a guiding

position wherein said attachment tube is moveably coupled to said coupling assembly, and an open position wherein said attachment tube is removed from said coupling assembly.

7. The surgical instrument of claim 6, wherein said coupling assembly and said attachment tube include a projection and detent retention system therebetween to retain said attachment tube in said guiding position.

8. The surgical instrument of claim 7, wherein said attachment tube defines a plurality of elongated detents along an outer surface and said coupling assembly includes at least one projection for mating with said elongated detents.

9. The surgical instrument of claim 8, wherein said at least one projection may be slidably disposed in said elongated detents to permit axial movement of said attachment tube with respect to said coupling assembly.

10. The surgical instrument of claim 6, wherein said coupling assembly includes an aperture for receiving said attachment tube and at least one movable projection extending into said aperture, wherein said movable projection cooperates with said attachment tube to retain said attachment tube in the guiding position.

11. The surgical instrument of claim 10, wherein said movable projection provides a tactile sensation to the user to indicate movement between the open position and the guiding position.

12. The surgical instrument of claim 1, wherein said motor includes a motor housing and said coupling assembly is removably coupled to the motor housing.

13. The surgical instrument of claim 12, wherein the motor housing includes a tool chuck and said coupling assembly includes a work shaft, said work shaft removably coupled to said tool chuck.

14. The surgical instrument of claim 13, wherein said tool chuck is moved to a locked position coupling the work shaft by rotational movement of said coupling assembly about a portion of said motor housing.

15. The surgical instrument of claim 1, wherein said angled attachment tube includes a curved portion.

16. The surgical instrument of claim 15, wherein the attachment tube further comprises at least one bearing proximal to the curved portion and at least one bearing distal to the curved portion to support at least a portion of the shaft.

17. The surgical instrument of claim 1, wherein the shaft includes a reduced diameter portion.

18. The surgical instrument of claim 1, wherein said shaft includes a curved portion.

19. The surgical instrument of claim 1, wherein said angled attachment tube has an angle of between about 3° and about 30°.

20. The surgical instrument of claim 1, wherein said tool has a height of about 1 to about 6 inches.

21. The surgical instrument of claim 1, wherein said tool has a diameter of about 0.02 to about 0.5 inches.

22. A method of assembling a surgical dissection instrument, comprising:

providing a motor with a first tool chuck, a dissection tool, and a coupler with a work shaft and a second tool chuck, and an angled attachment;

attaching the coupler to the motor with the work shaft coupled to the first tool chuck;

joining the angled attachment to the coupler;

inserting a portion of the dissection tool through the angled attachment and into the second tool chuck; and

locking the dissection tool in the second tool chuck.

23. The method of claim 22, wherein said joining permits axial displacement of the angled attachment with respect to the coupler and further including, adjusting the axial displacement of the angled attachment with respect to the coupler and locking the coupler to the angled attachment.

24. The method of claim 22, further including the step of moving the angled attachment with respect to the coupler to unlock the dissection tool from the second tool chuck and removing the dissection tool from the angled attachment.

25. A telescoping attachment assembly for use with a surgical dissection tool, comprising:  
an angled attachment having an outer surface and defining an internal bore for receiving the surgical dissection tool, said angled attachment having a proximal end;  
a coupler having a distal aperture for telescoping engagement said proximal end, said coupler including a first locking mechanism disposed adjacent to said aperture for selectively locking said angled attachment to said coupler, and said coupler including a second locking mechanism for selectively locking the surgical dissection tool to said coupler.

26. The apparatus of claim 25, wherein said coupler is adapted for connection to a powered surgical handpiece.

27. The apparatus of claim 26, wherein said coupler is adapted for removable connection to a powered surgical handpiece.

28. The apparatus of claim 25, wherein the surgical dissection tool is fixedly coupled to said coupler and said angled attachment telescopingly engages the surgical dissection tool.

29. A surgical system comprising:

a surgical instrument comprising a motor having a power output; a tool having a shaft with a dissection area disposed adjacent a distal end and a coupling area disposed adjacent a proximal end; a coupling assembly configured for coupling said power output to said coupling area of said tool; and an angled attachment tube positioned along at least a portion of said shaft and substantially supporting a portion of said shaft disposed adjacent said dissection area, said angled attachment tube having a straight distal portion; and

a viewing tube adapted to receive said straight distal portion and pass said dissection area therethrough.

30. The surgical system of claim 29, wherein said attachment tube includes a curved portion.

31. The surgical system of claim 30, wherein the attachment tube further comprises at least one bearing proximal to the curved portion and at least one bearing distal to the curved portion to support the portion of the shaft.

32. The surgical system of claim 29, wherein the shaft includes a reduced diameter portion.

33. The surgical system of claim 29, wherein said shaft includes a curved portion.

34. The surgical system of claim 29, wherein said angled attachment tube has an angle of between about 3° and about 30°.

35. The surgical system of claim 29, wherein said tool has a height of about 1 to about 6 inches.

36. The surgical system of claim 29, wherein said tool has a diameter of about 0.02 to about 0.5 inches.
37. The surgical system of claim 29, wherein said viewing tube further comprises a handle.
38. The surgical system of claim 29, wherein said viewing tube comprises a first diameter, and wherein said angled attachment tube comprises a second diameter, further wherein the first diameter is at least about two times the second diameter.